

Module 1: Introduction to .NET

- What is .NET?
- Components of .NET
- .NET ecosystem
- How to use .NET
- Build your first app by using .NET
- When to use .NET

Module 2: C# Syntax

- Lesson 1: Writing Applications in C# and .NET
- Lesson 2: Types of Data and Expressions
- Lesson 3: C# Language Constructs

Module 3: C# Language Concepts

- Lesson 1: Methods
- Lesson 2: Method Overloading
- Lesson 3: Exception Handling
- Lesson 4: Monitoring

Module 4: C# Structures, Collections and Events

- Lesson 1: Structs
- Lesson 2: Enums
- Lesson 3: Built-in Collections
- Lesson 4: Events

Module 5: C# Classes

- Lesson 1: Creating Classes
- Lesson 2: Interfaces
- Lesson 3: Understanding Generics in C#

Module 6: C# Inheritance

- Lesson 1: Hierarchies of Classes
- Lesson 2: Polymorphism
- Lesson 3: Extending Classes

Module 7: Input and Output

- Lesson 1: File I/O
- Lesson 2: Serialization and Deserialization
- Lesson 3: Streams

Module 8: ASP.NET Core Web API Introduction

- What is a Web API?
- RESTful Services and Principles
- HTTP Methods (GET, POST, PUT, DELETE)
- JSON and XML Data Formats

Module 9: Building Your First ASP.NET Web API

- Creating a New Web API Project
- Understanding Controllers and Actions
- Routing and URL Patterns
- Returning Data from API Endpoints

Module 10: Interact with an ASP.NET Core minimal API

- Explore ASP.NET Core APIs
- Document an API by using Swashbuckle
- Exercise - Interact with an API

Module 11: Implement HTTP operations in ASP.NET Razor Pages

- Explore HTTP clients in .NET Core
- Perform HTTP operations in Razor Pages
- Exercise - Implement HTTP operations in Razor Pages

Module 12: Render API responses in ASP.NET Core Razor Pages

- Explore Razor Pages project structure
- Discover Razor Pages syntax
- Exercise - Render API responses in Razor Pages

Module 13: Create a web API with ASP.NET Core controllers

- REST in ASP.NET Core
- Exercise - Create a web API project
- ASP.NET Core Web API Controllers
- Exercise - Add a data store

- Exercise - Add a controller
- CRUD actions in ASP.NET Core
- Exercise - Implement CRUD operations